

for erasing a display image on said liquid crystal display panel when a power source of a main body of said liquid crystal display device is turned OFF, comprising:

power source OFF detecting means for detecting an OFF signal that turns OFF the main body of said liquid crystal display device;

panel power maintaining means for, when said power OFF detecting means detects an OFF signal that turns OFF the main body of said liquid crystal display device, supplying power to said liquid crystal display panel for a certain period; and

erasing means for applying to all pixels in said liquid crystal display panel an OFF-level voltage, using the power supplied from said panel power maintaining means, when said power OFF detecting means detects the OFF signal that turns OFF the main body of said liquid crystal display device,

wherein said liquid display panel includes a pixel electrode in each pixel and an opposing electrode that opposes to said pixel electrode, said pixel electrode and said opposing electrode sandwiching a liquid crystal, and

wherein said erasing means applied rectangular wave signals, identical in terms of phase and potential, respectively into said pixel electrode and said opposing electrode.--

#### REMARKS

The foregoing amendments conform to the amendments made in the parent application.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached pages are captioned "Version With Markings To Show Changes Made."

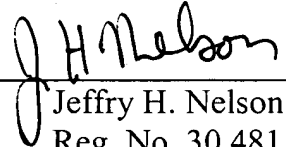
KANBE et al  
Serial No. (to be assigned)

Please charge any shortage in the fees required by the submission of this preliminary amendment to the account of Nixon & Vanderhye, Account No. 14-1140 (1035-281).

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION**

Please insert the following paragraph before the first line on page 1:

--This application is a division of Application No. 09/671,125, filed September 20, 2000, which is a division of Application No. 08/974,496, filed November 19, 1997, now U.S. Patent No. 6,151,016, issued November 21, 2000.--

**IN THE CLAIMS**

Amend claims 18, 20, 40 and 41 as follows:

18. (Amended) An erasing device for a liquid crystal display image, provided in a liquid crystal display device having a liquid crystal display panel whose pixels are driven by active elements, for erasing a display image on said liquid crystal display panel when a power source of a main body of said liquid crystal display device is turned OFF, comprising:

power source OFF detecting means for [detecting] outputting an OFF signal [that turns] when said power source OFF detecting means detects a signal that instructs to turn OFF the main body of said liquid crystal display device;

panel power maintaining means for, when said OFF signal is outputted, supplying power to said liquid crystal display panel for a certain period, and then shutting down power supply; [when said power source OFF detecting means detects said OFF signal;] and

erasing means for [shutting off] applying to all pixels in said liquid crystal display panel [entirely] an OFF-level voltage, within the certain period; [using the power supplied from said panel power maintaining means when said power source OFF detecting means detects said OFF signal]

said liquid crystal display panel including a pixel electrode in each pixel and an opposing electrode that opposes to said pixel electrode,

said erasing means including:

a source driver for outputting a video signal to source lines of said liquid crystal display panel;

a source driver control circuit for controlling said source driver; and

an opposing electrode control circuit for outputting an opposing electrode signal to said opposing electrode,

wherein a source enable signal, which is at a selecting level during the certain period, is inputted into said source driver circuit so that said pixel electrode and said opposing electrode receives an OFF voltage that turns OFF a liquid crystal, using the power supplied from said panel power maintaining means.

20. (Amended) The erasing device for a liquid crystal display image of Claim 18, wherein said erasing means [shuts off said liquid crystal display panel entirely] applies to said all pixels the OFF-level voltage by making a video signal outputted to source lines of a pixel electrode of said liquid crystal display panel and an opposing electrode signal

outputted to an opposing electrode of said liquid crystal display panel in phase at a same level.

40. (Amended) An erasing device for a liquid crystal display image, provided in a liquid crystal display device having a liquid crystal display panel whose pixels are driven by active elements, for erasing a display image on said liquid crystal display panel when a power source of a main body of said liquid crystal display device is turned OFF, comprising:

power source OFF detecting means for detecting whether the power source of the main body of said liquid crystal display device is turned OFF or not;

panel power maintaining means for supplying power to said liquid crystal display panel for a certain period after the power source of the main body of said liquid crystal display device is turned OFF; and

erasing means for [shutting off] applying to all pixels in said liquid crystal display panel [entirely] an OFF-level voltage by driving said liquid crystal display panel to apply [a] to said liquid crystal the OFF voltage which turns OFF said liquid crystal, [to said liquid crystal] using the power supplied from said panel power maintaining means when said power source OFF detecting means detects that the power source of the main body of said liquid crystal display device is turned OFF.

41. (Amended) The erasing device for a liquid crystal display image of Claim 40, wherein said erasing means outputs a gate driving signal which turns ON gate lines

sequentially to turn ON the active elements per line by means of a gate driver, said erasing means also outputting a video signal applied to pixel electrodes and an opposing electrode signal applied to an opposing electrode of said liquid crystal panel by means of a source driver and an opposing electrode signal control circuit, respectively, both said video signal and said opposing electrode signal being applied as said OFF voltage which turns OFF said liquid crystal.

Add the following new claims:

--45. The erasing device for the liquid crystal display image of Claim 18, wherein:

said liquid crystal display panel includes a pixel electrode which is provided in each pixel, and an opposing electrode opposing to said pixel electrode via a liquid crystal in between,

said erasing means applies a first rectangular wave signal to said pixel electrode while applying a second rectangular wave signal which is in same phase and level as those of the first rectangular wave signal to said opposing electrode.

46. The erasing device for a liquid crystal display image as set forth in Claim 18, wherein said erasing means further includes:

a gate driver for outputting a gate signal to gate lines of said liquid crystal display panel; and

a gate driver control circuit for controlling said gate driver,

wherein a gate enable signal, which is at a selecting level during the certain period, is inputted into said gate driver control so that a gate signal is outputted to said gate lines, using the power supplied from said panel power maintaining means.

47. The erasing device for a liquid crystal display image as set forth in Claim 46, wherein said erasing means is so adopted that the gate enable signal is inputted into said gate driver as a starting signal for said gate driver.

48. The erasing device for a liquid crystal display image as set forth in Claim 47, wherein said erasing means is so adopted that the gate signal is fixed at a voltage at a constant level within the certain period.

49. An erasing device for a liquid crystal display image, provided in a liquid crystal display device having a liquid crystal display panel whose pixels are driven by active elements, for erasing a display image on said liquid crystal display panel when a power source of a main body of said liquid crystal display device is turned OFF, comprising:

power source OFF detecting means for detecting an OFF signal that turns OFF the main body of said liquid crystal display device;

panel power maintaining means for, when said power OFF detecting means detects an OFF signal that turns OFF the main body of said liquid crystal display device, supplying power to said liquid crystal display panel for a certain period; and

erasing means for applying to all pixels in said liquid crystal display panel an OFF-level voltage, using the power supplied from said panel power maintaining means, when said power OFF detecting means detects the OFF signal that turns OFF the main body of said liquid crystal display device,

wherein said liquid display panel includes a pixel electrode in each pixel and an opposing electrode that opposes to said pixel electrode, said pixel electrode and said opposing electrode sandwiching a liquid crystal, and

wherein said erasing means applied rectangular wave signals, identical in terms of phase and potential, respectively into said pixel electrode and said opposing electrode.--